

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

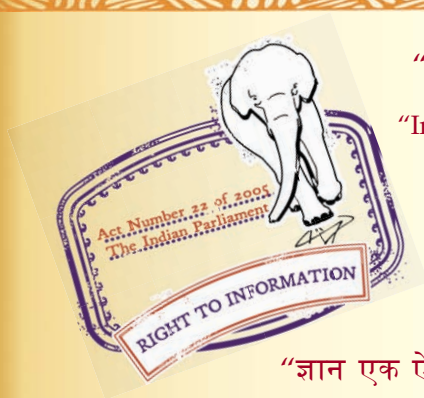
“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 13741-4 (1993): Carbide Tips, Part 4: Carbide Tips for Multi Point Tools [PGD 32: Cutting tools]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS 13741 (Part 4) : 1993
(Superseding IS 9327 : 1979)

(Reaffirmed 2003)

भारतीय मानक

कार्बाइड टिप

भाग 4 बहु नोक वाले औजारों के लिए कार्बाइड टिप — विशिष्ट

Indian Standard

CARBIDE TIPS

PART 4 CARBIDE TIPS FOR MULTI POINT TOOLS — SPECIFICATION

UDC 621.9'025 [669'018'25]

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

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Price Group 3

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Single Point Cutting Tools, Carbide Tips and Indexable Inserts Sectional Committee had been approved by the Production Engineering Division Council.

Dimensions and other requirements of carbide tips for cutting tools were covered in different Indian Standards as listed below:

IS 2162 : 1979	Dimensions of carbide tips for single point tools
IS 8065 : 1976	Dimensions of carbide tips for light cutting operations
IS 8301 : 1976	Dimensions of carbide tips for drills with point angle 115° (Type AB)
IS 9327 : 1979	Dimensions of carbide tips for reamers, core drills, end mills and slot milling cutters
IS 12294 : 1988	Dimensions of carbide tips for parting off and turning tools for sliding head type automats (IND 5 and IND 6)

It has been decided to cover all the above carbide tips under one Indian Standard in different parts for quick and ease of reference. Hence all the above standards have been combined in one standard having seven parts. Carbide tips for round nose turning tools have also been covered in part seven of the standard. The other Indian Standards on carbide tips of this series are:

IS 13741 (Part 1)	Carbide tips for single point tools
IS 13741 (Part 2)	Carbide tips for single point tools for light cutting operations
IS 13741 (Part 3)	Carbide tips for single point tool blanks for sliding head type automates
IS 13741 (Part 5)	Carbide tips for twist drills with point angle 115°
IS 13741 (Part 6)	Carbide tips for single point threading tools
IS 13741 (Part 7)	Carbide tips for single point round nose turning tools

The types have been so arranged in different parts so that review and updating becomes easier when the referred ISO or National Standard is updated.

In the preparation of this standard, considerable assistance has been derived from DIN 8011 : 1963 'Carbide tips for reamers, countersinks, counterbores and end mills' issued by Deutsches Institut für Normung (DIN).

The type BR has been included in line with SMS (Swedish) Standard.

These carbide tips are used on multi point tools covered in:

IS 9322 : 1980	Technical supply conditions for carbide tipped milling cutters
IS 9323 : 1991	Specification for carbide tipped end mills with parallel shanks (<i>first revision</i>)
IS 9324 : 1991	Specification for carbide tipped end mills with morse taper and tapped end shanks (<i>second revision</i>)
IS 9771 : 1981	Specification for carbide tipped core drills with morse taper shanks
IS 10884 : 1984	Specification for carbide tipped chucking reamers with parallel shanks
IS 10885 : 1984	Specification for carbide tipped chucking reamers with morse taper shank
IS 11934 : 1987	Specification for carbide tipped shell reamers
IS 11935 : 1987	Specification for carbide tipped chucking reamers with morse taper shank with long cutting edge
IS 11936 : 1987	Specification for carbide tipped long fluted machine reamer with morse taper shank.

This standard supersedes IS 9327 : 1979.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

CARBIDE TIPS

PART 4 CARBIDE TIPS FOR MULTI POINT TOOLS — SPECIFICATION

1 SCOPE

This standard covers the dimensions and other requirements for carbide tips for reamers, end mills, slot milling cutters and core drills.

2 REFERENCE

IS 2428 : 1964 'Application of carbides for machining, ranges of application and colour code' is necessary adjunct to this standard.

3 TYPES

Carbide tips for single point tools shall be of

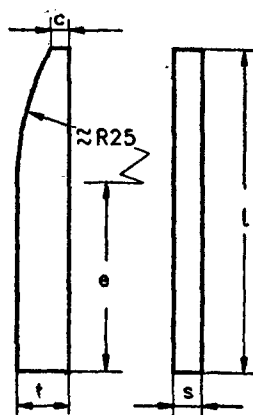
following types:

- Type R — for reamers
- Type BR — for reamers
- Type T — for end mill and slot milling cutters
- Type U — for slot milling cutters
- Type V — for core drills

4 DIMENSIONS

The dimensions of carbide tips shall be as given in Tables 1 to 5 read with respective figures corresponding to each type.

Table 1 Dimensions of Carbide Tips, Type R
(Clause 4)

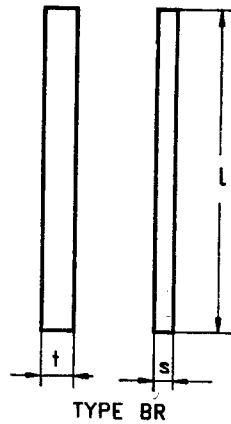


TYPE R

All dimensions in millimetres.

<i>l</i>		<i>t</i>		<i>s</i>		<i>c</i>	<i>e</i>
Size	Tol	Size	Tol	Size	Tol		
12	+0.6 0	2	+0.4 0	0.8	0 -0.1	0.8	5
16	+0.7 0	2.5		1.2	0 -0.2	1	7.1
19	+0.8 0	3		1.4		1	9
22		3.5		1.8		1.4	11.2
25		4		2.2		1.4	15
30	+0.9 0	5		2.8	0 -0.3	1.4	18

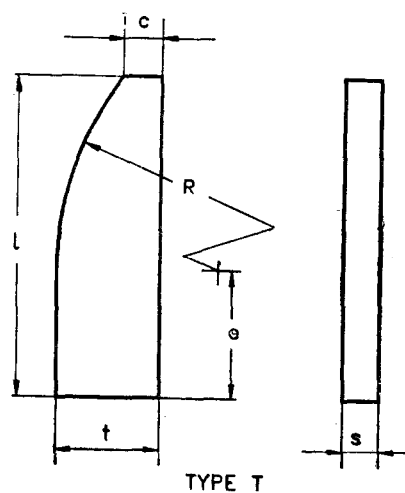
Table 2 Dimensions of Carbide Tips, Type BR
(Clause 4)



All dimensions in millimetres.

<i>l</i>		<i>t</i>		<i>s</i>	
Size	Tol.	Size	Tol.	Size	Tol.
16	+0.7 0	1.5	+0.4 0	1	0 -0.2
19		1.7		1.2	
22	+0.8 0	2.2		1.5	
25		2.5		1.5	0 -0.3
30	+0.9 0	3		1.8	

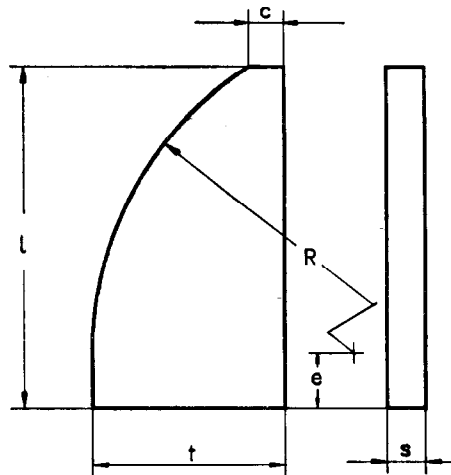
Table 3 Dimensions of Carbide Tips, Type T
(Clause 4)



All dimensions in millimetres.

<i>l</i>		<i>t</i>		<i>s</i>		<i>c</i>	<i>e</i>	<i>R</i>
Size	Tol	Size	Tol	Size	Tol			
12	$+0.6$ 0	3	$+0.4$ 0	1.2	0 -0.2	1	4.5	15
16	$+0.7$ 0	3.5		1.6		1	7.5	15
19		4.5		2		1.8	7.5	25
22	$+0.8$ 0	5.6		2.5	0 -0.3	2.5	9.5	25
25		8		2.8		3	10	25

Table 4 Dimensions of Carbide Tips, Type U
(Clause 4)

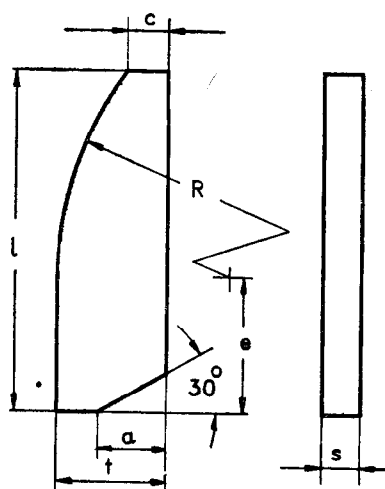


TYPE U

All dimensions in millimetres.

<i>l</i>		<i>t</i>		<i>s</i>		<i>c</i>	<i>e</i>	<i>R</i>
Size	Tol	Size	Tol	Size	Tol			
12	$+0.6$ 0	5.6	$+0.4$ 0	1.1	± 0.2	1	1.4	15
16	$+0.7$ 0	6.7		1.6		1	4	15
19		8		2		1.8	2.5	25
22	$+0.8$ 0	11.2	± 0.3	2.5	± 0.3	2.5	2.8	25
25		14		2.8		3	4	25

Table 5 Dimensions of Carbide Tips, Type V
(Clause 4)



TYPE V

All dimensions in millimetres.

<i>l</i>		<i>t</i>		<i>s</i>		<i>a</i>	<i>c</i>	<i>e</i>	<i>R</i>
Size	Tol	Size	Tol	Size	Tol				
22	+0.8 0	5.6	+0.4 0	2.5	±0.3	4	2.5	9	25
25		8		2.8		5	3	10	25
30	+0.9 0	12		4		8	3	11	25

5 GENERAL REQUIREMENTS

5.1 Carbide tips shall be free from cracks.

6 DESIGNATION

Carbide tips shall be designated by carbide tip type, length (*l*) IS No. and range of application as per IS 2428 : 1964.

Carbide tip of Type U have length (*l*) 22 mm and with range of application K 20 and

conforming to this standard, shall be designated as:

Carbide tip IS 13741 (Part 4) U 22 K 20

7 MARKING

Shall be marked with designation, manufacturer's name or trade-mark on the carton.

8 PACKAGING

The carbide tips shall be suitably packed to avoid damage in handling and transit.

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.